

IN THE CLAIMS:

The following is a current listing of claims and will replace all prior versions and listings of claims in the application. Please amend the claims as follows:

1. (Currently Amended) ~~An apparatus switch fabric network for routing packets, wherein each of said packets comprise packet field data,~~ comprising:

a switch having a plurality of ports, wherein said switch is configured to receive[[s]] a packet on a first one of said plurality of ports, said packet including header data including a first turn value specifying a second of the plurality of ports relative to the first port;

wherein said switch is configured, and based ~~only~~ on said ~~packet field~~ header data and the number of said plurality of ports, to transmit[[s]] said packet on the [[a]] ~~second one of said plurality of port~~[[s]].

2. (Currently Amended) ~~A system, switch fabric network for routing packets, wherein each of said packets comprise packet field data, said packet field data comprising a turn pool, wherein said turn pool comprises a plurality of turn values, and a turn value indicates the position of a second port relative to a first port, said network~~ comprising:

a switch having a plurality of ports including a first port and a second port, wherein said switch is configured to receive[[s]] a packet on said first port ~~of said plurality of ports~~, wherein said packet includes header data, said header data comprising a turn pool, wherein said turn pool comprises a plurality of turn values, including a turn value specifying the second port relative to the first port;

wherein the switch is configured, and based on said ~~packet field~~ header data and the number of said plurality of ports, to transmit[[s]] said packet on said second port ~~of said plurality of ports~~.

3. (Canceled)

4. (Currently Amended) ~~[[A]]~~ The system of claim 2, wherein said ~~packet field~~ header data is comprised of a credit length, a bit count, an operation, a Path Identifier (PID) index, a Maximum Transmission Unit (MTU) and an Extended Unique Identifier (EUI).

5-12. (Canceled)

13. (Currently Amended) The system of claim 2, wherein said ~~packet field~~ header data further comprises a bit count.

14. (Currently Amended): ~~A switch for routing a packet, wherein said packet comprises packet field data,~~ comprising:

a plurality of ports;

means for receiving ~~said a~~ packet on a first of said plurality of ports, wherein said packet includes header data including a plurality of turn values;

means for using one of said plurality of turn values to determine~~[[ing]]~~ a second of said plurality of ports on which to transmit said received packet,~~using only said packet field data and the number of said ports;~~ and

means for transmitting said packet on said second port.

15. (Currently Amended) A switch, ~~for routing a packet, wherein said packet comprises packet field data, said packet field data comprising a turn pool, wherein said turn pool comprises a plurality of turn values, and a turn value indicates the position of a second port relative to a first port, said switch~~ comprising:

a plurality of ports;

first means for receiving ~~said~~ a packet on ~~said~~ a first port of said plurality of ports, said packet comprising packet header data, wherein said packet header data comprises a turn pool, wherein said turn pool comprises a plurality of turn values, one of which specifies a second port of said plurality of ports relative to said first port;

second means for ~~determining said second port on which to transmit said received packet,~~ using said turn pool ~~packet field data~~ and the number of said plurality of ports to select said second port on which to transmit said packet; and

third means for transmitting said packet on said second port, ~~where said determining means utilizes said turn pool to select said second port.~~

16. (Currently Amended) The switch of claim 15, wherein said ~~packet-field~~ header data further comprises a bit count and said ~~determining~~ second means utilizes said bit count to select said second port.

17. (Currently Amended) The switch of claim 15, further comprising fourth means for ~~to~~ modifying said ~~packet-field~~ header data prior to transmitting said packet.

18. (Currently Amended) A method, ~~of routing a packet from a source to a destination within a fabric having at least one switch, said switch having a plurality of ports, said method~~ comprising:

~~encapsulating said packet with a header, wherein said header comprising packet field data;~~

~~transmitting said encapsulated packet from said source to said switch;~~

receiving, at a switch within a network, said an encapsulated packet, wherein said encapsulated packet includes header data that includes a plurality of turn values, and wherein said encapsulated packet is received at first of a plurality of ports of ~~by said switch on a first of said ports;~~

determining a second port of said plurality of ports using ~~only~~ said packet field header data and the number of said plurality of ports; and

transmitting said encapsulated packet from said switch via said second ~~output~~ port.

19. (Currently Amended) The method of claim 18, further comprising modifying said header ~~packet field~~ data prior to transmitting via said second port.

20. (Currently Amended) A method of routing a packet from a source to a destination within a fabric having at least one switch, ~~said switch having a plurality of ports~~, said method comprising:
~~encapsulating said packet with a header, wherein said header comprises packet field data,~~
~~said packet field data comprising a turn pool, wherein said turn pool comprises a plurality of turn values, and a turn value indicates the position of a second port relative to a first port;~~
~~transmitting said encapsulated packet from said source to said switch;~~
receiving said an encapsulated packet ~~by said switch on said~~ at a first port of a said plurality of ports of said at least one switch, wherein the encapsulated packet includes a header including a first turn value that specifies a second of said plurality of ports relative to the first port;
determining said second port using said ~~packet field~~ header data of the encapsulated packet and the number of said plurality of ports; and
transmitting said encapsulated packet from said at least one switch via said second port.
21. (Currently Amended) The method of claim 20, ~~wherein~~ by said packet field data further comprises a bit count.
22. (Currently Amended) The method of claim 20, further comprising modifying said header ~~packet field data~~ prior to transmitting via said second port.
23. (Currently Amended) The method of claim 22, ~~wherein~~ by said ~~packet field data~~ header further comprises a bit count.
24. (Currently Amended): The method of claim 20, wherein said fabric comprises a plurality of switches, and said method further comprises repeating said receiving, determining and transmitting at various ones of the plurality of switches with corresponding ones of a plurality of turn values associated with the packet ~~steps~~ until said packet reaches said destination.

25. (Currently Amended) The method of claim 21, said header further comprising a turn pool including a plurality of turn values that includes said first turn value, further comprising using wherein said turn pool and bit count of said packet are usable received by said destination to create a second header, ~~used by said destination,~~ to encapsulate a second packet to be routed from said destination to said source.

26. (Currently Amended) The method of claim 23, said header further comprising a turn pool including a plurality of turn values that includes said first turn value, further comprising using wherein said turn pool and bit count of said packet are usable received by said destination to create a second header, ~~used by said destination,~~ to encapsulate a second packet to be routed from said destination to said source.

27. (New) The apparatus of claim 1, said header data including a plurality of turn values that includes said first turn value, wherein each of the plurality of turn values corresponds to a respective network device within a path for said packet and specifies an output port of its respective network device relative to an input port of the respective network device, and wherein a given one of the respective network devices in the path is configured to transmit said packet on an output port of the given device that is specified by the corresponding one of the plurality of turn values.

28. (New) The method of claim 20, wherein said header includes a turn pool including a plurality of turn values that includes said first turn value.